

B1 Cont. 3. (Amended) The method of claim 2 further including the step of routing over the Internet responsive to at least one of the service categories.

B2 SUB 10. (Amended) The method of claim 2 wherein the user data includes an Internet protocol IP packet.

B3 21. (Amended) The method of claim 2 wherein the fast packet network is an asynchronous transfer mode network and the packets are asynchronous transfer mode cells.

22. (Amended) A method comprising the steps of:  
receiving a plurality of frame relay packets over a permanent virtual circuit at a first node in an asynchronous transfer mode network;  
generating an asynchronous transfer mode address based on a data field other than a data link connection identifier within the frame relay packets; and  
routing the packets through the asynchronous transfer mode network based on the asynchronous transfer mode address;  
wherein the step of routing includes routing the packets responsive to one of a plurality of service categories.

B4 SUB 25. (Amended) The method of claim 24 wherein the service categories are determined using Internet protocol IP data within a data field of a packet passed by the asynchronous transfer mode switch.

B5 SUB 27. (Amended) In a fast packet network, a method comprising the steps of:  
receiving a fast packet;

B5 Cont. comparing an address of the fast packet with a layer 3 Internet protocol IP address contained within the fast packet; and  
determining whether the address is consistent with the layer 3 internet protocol address;  
wherein the step of determining including examination of a sending address or a destination address.

B6 Sub 12/27 32. (Amended) A network comprising:  
customer premises equipment;  
a fast packet switch coupled to the customer premises equipment with at least one permanent virtual circuit and receiving a plurality of frame relay data packets, the fast packet switch including address translation circuitry for translating user data within at least one of the frame relay data packets into a fast packet address;  
wherein the translation circuitry is responsive to a plurality of different service categories.

B7 34. (Amended) The network of claim 32 wherein the translation circuitry is responsive to Internet protocol IP data within the frame relay data packets.

35. (Amended) The network of claim 34 wherein the translation circuitry is responsive to layer 3 Internet protocol IP data.

36. (Amended) The network of claim 32 wherein the translation circuitry is configured to determine a quality of service responsive to layer 4 data.

B8 38. (Amended) An asynchronous transfer mode switch comprising translation circuitry for translating a plurality of frame relay packets into asynchronous transfer mode cells, the

B8 Cont. asynchronous transfer mode switch assigning an address based on information contained within a user data field of the frame relay packets;

wherein the translation circuitry includes a separate routing table for each of a plurality of different service categories.

Sub D13 41. (Amended) The asynchronous transfer mode switch of claim 38 wherein the translation circuitry determines the different service categories using layer 3 Internet protocol IP data.

42. (Amended) The asynchronous transfer mode switch of claim 38 wherein the translation circuitry determines the different service categories using layer 4 Internet protocol IP data.

B9 43. (Amended) An asynchronous transfer mode switch comprising translation circuitry for translating a plurality of frame relay packets into asynchronous transfer mode cells having an address responsive to layer 3 Internet protocol IP data contained within a user data field of the frame relay packets.

44. (Amended) An asynchronous transfer mode switch comprising translation circuitry for translating a plurality of frame relay packets into asynchronous transfer mode cells having an address responsive to layer 4 Internet protocol IP data contained within a user data field of the frame relay packets.

45. (Amended) A fast packet network having a node, said node including error checking circuitry for determining routing errors by comparing an address of a fast packet with layer 3 Internet